



## SEQUENCE LISTING

RECEIVED  
APR 13 2001  
TECH CENTER 1600/2900

BL  
<110> MediGene Aktiengesellschaft

<120> Myocardium- and skeletal muscle-specific nucleic acid, its preparation and use

<150> 19725186.2

<151> June 13, 1997

<160> 5

<210> 1

<211> 1936

<212> DNA

<<170> FastSEQ for Windows Version 3.0

213> Homo sapiens

<400> 1

CAGCCTGCCA CTTGCCTCCC TGCCTGCTTC TGGCTGCCTT GAATGCCTGG TCCTTCAAGC 60  
TCCTTCTGGG TCTGACAAAG CAGGGACCAT GTCTACCTTT GGCTACCGAA GAGGACTCAG 120  
TAAATACGAA TCCATCGACG AGGATGAACT CCTCGCCTCC CTGTCAGCCG AGGAGCTGAA 180  
GGAGCTAGAG AGAGAGTTGG AAGACATTGA ACCTGACCGC AACCTTCCCG TGGGGCTAAG 240  
GCAAAAGAGC CTGACAGAGA AAACCCCCAC AGGGACATTC AGCAGAGAGG CACTGATGGC 300  
CTATTGGGAA AAGGAGTCCC AAAAACTCTT GGAGAAGGAG AGGCTGGGGG AATGTGGAAA 360  
GGTTGCAGAA GACAAAGAGG AAAGTGAAGA AGAGCTTATC TTTACTGAAA GTAACAGTGA 420  
GGTTTCTGAG GAAGTGTATA CAGAGGAGGA GGAGGAGGAG TCCCAGGAGG AAGAGGAGGA 480  
AGAAGACAGT GACGAAGAGG AAAGAACAAT TGAAACTGCA AAAGGGATTA ATGGAAGTGT 540  
AAATTATGAT AGTGTCAATT CTGACAACTC TAAGCCAAAG ATATTTAAAA GTCAAATAGA 600  
GAACATAAAT TTGACCAATG GCAGCAATGG GAGGAACACA GAGTCCCCAG CTGCCATTCA 660  
CCCTTGTGGA AATCCTACAG TGATTGAGGA CGCTTTGGAC AAGATTAAAA GCAATGACCC 720  
TGACACCACA GAAGTCAATT TGAACAACAT TGAGAACATC ACAACACAGA CCCTTACCCG 780  
CTTTGCTGAA GCCCTCAAGG ACAACACTGT GGTGAAGACG TTCAGTCTGG CCAACACGCA 840  
TGCCGACGAC AGTGCAGCCA TGGCCATTGC AGAGATGCTC AAAGCCAATG AGCACATCAC 900

CAACGTAAAC GTCGAGTCCA ACTTCATAAC GGGAAAGGGG ATCCTGGCCA TCATGAGAGC 960  
 TCTCCAGCAC AACACGGTGC TCACGGAGCT GCGTTTCCAT AACCAGAGGC ACATCATGGG 1020  
 CAGCCAGGTG GAAATGGAGA TTGTCAAGCT GCTGAAGGAG AACACGACGC TGCTGAGGCT 1080  
 GGGATACCAT TTTGAACTCC CAGGACCAAG AATGAGCATG ACGAGCATTT TGACAAGAAA 1140  
 TATGGATAAA CAGAGGCAAA AACGTTTGCA GGAGCAAAAA CAGCAGGAGG GATACGATGG 1200  
 AGGACCCAAT CTTAGGACCA AAGTCTGGCA AAGAGGAACA CCTAGCTCTT CACCTTATGT 1260  
 ATCTCCCAGG CACTCACCTT GGTCATCCCC AAAACTCCCC AAAAAAGTCC AGACTGTGAG 1320  
 GAGCCGTCTT CTGTCTCCTG TGGCCACACT TCCTCCTCCT CCCCCTCCTC CTCCTCCTCC 1380  
 CCCTCCTTCT TCCCAAAGGC TGCCACCACC TCCTCCTCCT CCCCCTCCTC CACTCCCAGA 1440  
 GAAAAAGCTC ATTACCAGAA ACATTGCAGA AGTCATCAAA CAACAGGAGA GTGCCCCAAG 1500  
 GGCATTACAA AATGGACAAA AAAAGAAAAA AGGGAAAAAG GTCAAGAAAC AGCCAAACAG 1560  
 TATTCTAAAG GAAATAAAAA ATTCTCTGAG GTCAGTGCAA GAGAAGAAAA TGGAAGACAG 1620  
 TTCCCGACCT TCTACCCAC AGAGATCAGC TCATGAGAAT CTCATGGAAG CAATTCGGGG 1680  
 AAGCAGCATA AAACAGCTAA AGCGGGTGGG AGTTCCAGAA GCCCTGCGAT GGGAACATGA 1740  
 TCTTTAGAAG AGGATGCAGA ACTGTTTCACT GGTATTACAT GAAATGCATT GTGAGATGTT 1800  
 TCTAAAATAC CTTCTTCAAT TCAAAATGAT CCCTGACTTT AAAAATAATC TCACCCATTA 1860  
 ATTCCAAAGA GAATCTTAAG AAACAATCAG CATGTTTCTT CTGTAAATAT GAAAATAAAT 1920  
 TTCTTTTTTA TGTCGT 1936

<210> 2

<211> 2080

<212> DNA

<213> Homo sapiens

<400> 2

CAGCCTGCCA CTTGCCTCCC TGCCTGCTTC TGGCTGCCTT GAATGCCTGG TCCTTCAAGC 60  
 TCCTTCTGGG TCTGACAAAG CAGGGACCAT GTCTACCTTT GGCTACCGAA GAGGACTCAG 120  
 TAAATACGAA TCCATCGACG AGGATGAACT CCTCGCCTCC CTGTCAGCCG AGGAGCTGAA 180  
 GGAGCTAGAG AGAGAGTTGG AAGACATTGA ACCTGACCGC AACCTTCCCG TGGGGCTAAG 240  
 GCAAAAGAGC CTGACAGAGA AAACCCCCAC AGGGACATTC AGCAGAGAGG CACTGATGGC 300  
 CTATTGGGAA AAGGAGTCCC AAAAATCTT GGAGAAGGAG AGGCTGGGGG AATGTGGAAA 360  
 GGTTCAGAA GACAAAGAGG AAAGTGAAGA AGAGCTTATC TTTACTGAAA GTAACAGTGA 420  
 GGTTCAGAG GAAGTGTATA CAGAGGAGGA GGAGGAGGAG TCCCAGGAGG AAGAGGAGGA 480  
 AGAAGACAGT GACGAAGAGG AAAGAACAAT TGAACTGCA AAAGGGATTA ATGGAAGTGT 540  
 AAATTATGAT AGTGTCAATT CTGACAATC TAAGCCAAAG ATATTTAAAA GTCAAATAGA 600

GAACATAAAT TTGACCAATG GCAGCAATGG GAGGAACACA GAGTCCCCAG CTGCCATTCA 660  
 CCCTTGTGGA AATCCTACAG TGATTGAGGA CGCTTTGGAC AAGATTAAAA GCAATGACCC 720  
 TGACACCACA GAAGTCAATT TGAACAACAT TGAGAACATC ACAACACAGA CCCTTACCCG 780  
 CTTTGCTGAA GCCCTCAAGG ACAACACTGT GGTGAAGACG TTCAGTCTGG CCAACACGCA 840  
 TGCCGACGAC AGTGCAGCCA TGGCCATTGC AGAGATGCTC AAAGCCAATG AGCACATCAC 900  
 CAACGTAAAC GTCGAGTCCA ACTTCATAAC GGGAAAGGGG ATCCTGGCCA TCATGAGAGC 960  
 TCTCCAGCAC AACACGGTGC TCACGGAGCT GCGTTTCCAT AACCAGAGGC ACATCATGGG 1020  
 CAGCCAGGTG GAAATGGAGA TTGTCAAGCT GCTGAAGGAG AACACGACGC TGCTGAGGCT 1080  
 GGGATACCAT TTTGAACTCC CAGGACCAAG AATGAGCATG ACGAGCATTT TGACAAGAAA 1140  
 TATGGATAAA CAGAGGCAAA AACGTTTGCA GGAGCAAAAA CAGCAGGAGG GATACGATGG 1200  
 AGGACCCAAT CTTAGGACCA AAGTCTGGCA AAGAGGAACA CCTAGCTCTT CACCTTATGT 1260  
 ATCTCCCAGG CACTCACCCT GGTCATCCCC AAAACTCCCC AAAAAAGTCC AGACTGTGAG 1320  
 GAGCCGTCTT CTGTCTCCTG TGGCCACACT TCCTCCTCCT CCCCCTCCTC CTCCTCCTCC 1380  
 CCCTCCTTCT TCCCAAAGGC TGCCACCACC TCCTCCTCCT CCCCCTCCTC CACTCCCAGA 1440  
 GAAAAAGCTC ATTACCAGAA ACATTGCAGA AGTCATCAAA CAACAGGAGA GTGCCCCAACG 1500  
 GGCATTACAA AATGGACAAA AAAAGAAAAA AGGGAAAAAG GTCAAGAAAC AGCCAAACAG 1560  
 TATTCTAAAG GAAATAAAAA ATTCTCTGAG GTCAGTGCAA GAGAAGAAAA TGGAAGACAG 1620  
 TTCCCGACCT TCTACCCAC AGAGATCAGC TCATGAGAAT CTCATGGAAG CAATTCGGGG 1680  
 AAGCAGCATA AAACAGCTAA AGCGGGTGGA AGTTCCAGAA GCCCTGCGAT GGGAACATGA 1740  
 TCTTTAGAAG AGGATGCAGA ACTGTTCACT GGTATTACAT GAAATGCATT GTGAGATGTT 1800  
 TCTAAAATAC CTTCTTCAAT TCAAAATGAT CCCTGACTTT AAAAATAATC TCACCCATTA 1860  
 ATTCCAAAGA GAATCTTAAG AAACAATCAG CATGTTTCTT CTGTAAATAT GAAAATAAAT 1920  
 TTCTTTTTTA TGTCGTGAGA TTTGTATTGG CAAGAAGCAG TTAATTTAAA GATGCTCTTC 1980  
 CTATCTGTGG ATGTGTTGGT AACTCCGAGT TGTAATGAGT TCATGAAATG TGCTGTTATT 2040  
 TTTGTAATCT CAATAAATGT GGATTGAAGT TTTTTCCTT 2080

<210> 3

<211> 2268

<212> DNA

<213> Homo sapiens

<400> 3

CAGCCTGCCA CTTGCCTCCC TGCCTGCTTC TGGCTGCCTT GAATGCCTGG TCCTTCAAGC 60  
 TCCTTCTGGG TCTGACAAAG CAGGGACCAT GTCTACCTTT GGCTACCGAA GAGGACTCAG 120  
 TAAATACGAA TCCATCGACG AGGATGAACT CCTCGCCTCC CTGTCAGCCG AGGAGCTGAA 180  
 GGAGCTAGAG AGAGAGTTGG AAGACATTGA ACCTGACCGC AACCTTCCCG TGGGGCTAAG 240

GCAAAAGAGC CTGACAGAGA AAACCCCCAC AGGGACATTC AGCAGAGAGG CACTGATGGC 300  
 CTATTGGGAA AAGGAGTCCC AAAAAGTCTT GGAGAAGGAG AGGCTGGGGG AATGTGGAAA 360  
 GGTTCAGAA GACAAAGAGG AAAGTGAAGA AGAGCTTATC TTTACTGAAA GTAACAGTGA 420  
 GGTTCCTGAG GAAGTGTATA CAGAGGAGGA GGAGGAGGAG TCCCAGGAGG AAGAGGAGGA 480  
 AGAAGACAGT GACGAAGAGG AAAGAACAAT TGAAACTGCA AAAGGGATTA ATGGAAGTGT 540  
 AAATTATGAT AGTGTCAATT CTGACAACTC TAAGCCAAAG ATATTTAAAA GTCAAATAGA 600  
 GAACATAAAT TTGACCAATG GCAGCAATGG GAGGAACACA GAGTCCCCAG CTGCCATTCA 660  
 CCCTTGTTGA AATCCTACAG TGATTGAGGA CGCTTTGGAC AAGATTAAAA GCAATGACCC 720  
 TGACACCACA GAAGTCAATT TGAACAACAT TGAGAACATC ACAACACAGA CCCTTACCCG 780  
 CTTTGCTGAA GCCCTCAAGG ACAACACTGT GGTGAAGACG TTCAGTCTGG CCAACACGCA 840  
 TGCCGACGAC AGTGCAGCCA TGGCCATTGC AGAGATGCTC AAAGCCAATG AGCACATCAC 900  
 CAACGTAAAC GTCGAGTCCA ACTTCATAAC GGGAAAGGGG ATCCTGGCCA TCATGAGAGC 960  
 TCTCCAGCAC AACACGGTGC TCACGAGCT GCGTTTCCAT AACCAGAGGC ACATCATGGG 1020  
 CAGCCAGGTG GAAATGGAGA TTGTCAAGCT GCTGAAGGAG AACACGACGC TGCTGAGGCT 1080  
 GGGATACCAT TTTGAACTCC CAGGACCAAG AATGAGCATG ACGAGCATTT TGACAAGAAA 1140  
 TATGGATAAA CAGAGGCAAA AACGTTTGCA GGAGCAAAAA CAGCAGGAGG GATACGATGG 1200  
 AGGACCCAAT CTTAGGACCA AAGTCTGGCA AAGAGGAACA CCTAGCTCTT CACCTTATGT 1260  
 ATCTCCCAGG CACTCACCTT GGTTCATCCCC AAAACTCCCC AAAAAAGTCC AGACTGTGAG 1320  
 GAGCCGTCTT CTGTCTCCTG TGGCCACACT TCCTCCTCCT CCCCCTCCTC CTCCTCCTCC 1380  
 CCCTCCTTCT TCCCAAAGGC TGCCACCACC TCCTCCTCCT CCCCCTCCTC CACTCCCAGA 1440  
 GAAAAAGCTC ATTACCAGAA ACATTGCAGA AGTCATCAAA CAACAGGAGA GTGCCCCAACG 1500  
 GGCATTACAA AATGGACAAA AAAAGAAAAA AGGGAAAAAG GTCAAGAAAC AGCCAAACAG 1560  
 TATTCTAAAG GAAATAAAAA ATTCTCTGAG GTCAGTGCAA GAGAAGAAAA TGGAAGACAG 1620  
 TTCCCGACCT TCTACCCAC AGAGATCAGC TCATGAGAAT CTCATGGAAG CAATTCGGGG 1680  
 AAGCAGCATA AACAGCTAA AGCGGGTGGA AGTTCCAGAA GCCCTGCGAT GGGAACATGA 1740  
 TCTTTAGAAG AGGATGCAGA ACTGTTTCACT GGTATTACAT GAAATGCATT GTGAGATGTT 1800  
 TCTAAAATAC CTTCTTCAAT TCAAAATGAT CCCTGACTTT AAAAATAATC TCACCCATTA 1860  
 ATTCCAAAGA GAATCTTAAG AAACAATCAG CATGTTTCTT CTGTAAATAT GAAAATAAAT 1920  
 TTCTTTTTTA TGTCGTGAGA TTGTATTGG CAAGAAGCAG TTAATTTAAA GATGCTCTTC 1980  
 CTATCTGTGG ATGTGTTGGT AACTCCGAGT TGTAATGAGT TCATGAAATG TGCTGTTATT 2040  
 TTTGTAATCT CAATAAATGT GGATTGAAGT TTTTCCCTT TTTTAAAGC CAAACTAATA 2100  
 TTTTCTGTG ACTTGATACA TCTGTCAGAT TTTTGTAATC TCGATAAATG TGTATTGAAG 2160  
 TTTTTCCTT TTTTAAAAA AGCCAAACTA ATATTTTCT GTGAGTTAAT ACATCTGTCA 2220  
 GGTGTGTATG TAACATTACT GGACATTAAA AAAAATTATT ACATTCTC 2268

<211> 552

<212> PRT

<213> Homo sapiens

<400> 4

```
Met Ser Thr Phe Gly Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile
1
Asp Glu Asp Glu Leu Leu Ala Ser Leu Ser Ala Glu Glu Leu Lys Glu
20 25
30
Leu Glu Arg Glu Leu Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val
35 40
45
Gly Leu Arg Gln Lys Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe
50 55
60
Ser Arg Glu Ala Leu Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu
65 70 75
80
Leu Glu Lys Glu Arg Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys
85 90
95
Glu Glu Ser Glu Glu Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val
100 105
110
Ser Glu Glu Val Tyr Thr Glu Glu Glu Glu Glu Glu Ser Gln Glu Glu
115 120
125
Glu Glu Glu Glu Asp Ser Asp Glu Glu Glu Arg Thr Ile Glu Thr Ala
130 135
140
Lys Gly Ile Asn Gly Thr Val Asn Tyr Asp Ser Val Asn Ser Asp Asn
145 150 155
160
Ser Lys Pro Lys Ile Phe Lys Ser Gln Ile Glu Asn Ile Asn Leu Thr
165 170
175
Asn Gly Ser Asn Gly Arg Asn Thr Glu Ser Pro Ala Ala Ile His Pro
```

	180	185
190		
	Cys Gly Asn Pro Thr Val Ile Glu Asp Ala Leu Asp Lys Ile Lys Ser	
	195	200
205		
	Asn Asp Pro Asp Thr Thr Glu Val Asn Leu Asn Asn Ile Glu Asn Ile	
	210	215
220		
	Thr Thr Gln Thr Leu Thr Arg Phe Ala Glu Ala Leu Lys Asp Asn Thr	
	225	230 235
240		
	Val Val Lys Thr Phe Ser Leu Ala Asn Thr His Ala Asp Asp Ser Ala	
	245	250
255		
	Ala Met Ala Ile Ala Glu Met Leu Lys Ala Asn Glu His Ile Thr Asn	
	260	265
270		
	Val Asn Val Glu Ser Asn Phe Ile Thr Gly Lys Gly Ile Leu Ala Ile	
	275	280
285		
	Met Arg Ala Leu Gln His Asn Thr Val Leu Thr Glu Leu Arg Phe His	
	290	295
300		
	Asn Gln Arg His Ile Met Gly Ser Gln Val Glu Met Glu Ile Val Lys	
	305	310 315
320		
	Leu Leu Lys Glu Asn Thr Thr Leu Leu Arg Leu Gly Tyr His Phe Glu	
	325	330
335		
	Leu Pro Gly Pro Arg Met Ser Met Thr Ser Ile Leu Thr Arg Asn Met	
	340	345
350		
	Asp Lys Gln Arg Gln Lys Arg Leu Gln Glu Gln Lys Gln Gln Glu Gly	
	355	360
365		
	Tyr Asp Gly Gly Pro Asn Leu Arg Thr Lys Val Trp Gln Arg Gly Thr	
	370	375
380		
	Pro Ser Ser Ser Pro Tyr Val Ser Pro Arg His Ser Pro Trp Ser Ser	
	385	390 395
400		

Pro Lys Leu Pro Lys Lys Val Gln Thr Val Arg Ser Arg Pro Leu Ser  
 405 410  
 415  
 Pro Val Ala Thr Leu Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro  
 420 425  
 430  
 Pro Ser Ser Gln Arg Leu Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro  
 435 440  
 445  
 Leu Pro Glu Lys Lys Leu Ile Thr Arg Asn Ile Ala Glu Val Ile Lys  
 450 455 460  
 Gln Gln Glu Ser Ala Gln Arg Ala Leu Gln Asn Gly Gln Lys Lys Lys  
 465 470 475  
 480  
 Lys Gly Lys Lys Val Lys Lys Gln Pro Asn Ser Ile Leu Lys Glu Ile  
 485 490  
 495  
 Lys Asn Ser Leu Arg Ser Val Gln Glu Lys Lys Met Glu Asp Ser Ser  
 500 505  
 510  
 Arg Pro Ser Thr Pro Gln Arg Ser Ala His Glu Asn Leu Met Glu Ala  
 515 520  
 525  
 Ile Arg Gly Ser Ser Ile Lys Gln Leu Lys Arg Val Glu Val Pro Glu  
 530 535 540  
 Ala Leu Arg Trp Glu His Asp Leu  
 545 550

<210> 5

<211> 10

<212> DNA

<213> Homo sapiens

<400> 5

CCTTCTACCC

<210> 6

<211> 279

<212> DNA

<213> Homo sapiens

<400> 6

GCCAACACGC	ANTCCGACGA	CAGTGCAGCC	ATGGTCATTG	CAGAGATGCN	CAAAGTCAA	60
TGAGCACATC	ACCAACGTAA	ACGTCGAGTC	CAACTTCATA	ACGGGAAAGG	GGATCCTGGC	120
CATCATGAGA	GCTCTCCAGC	ACAACACGGT	GCTCACGGAG	CTGCGGTTTC	ATAACCAGAG	180
GCACATCATG	GGCAGCCAGG	TGGAAATGGA	GATTGTCAAG	CTNCTGAAGG	AGAACACGAC	240
GCTNCTGAGG	CTGGGNTACC	ATTTTNAACT	CCCAGGACC			279

<210> 7

<211> 92

<212> PRT

<213> Homo sapiens



<400> 7

Pro Thr Arg Asn Pro Thr Thr Val Gln Pro Trp Ser Leu Gln Arg Cys

1 5 10

15

Ile Lys Val Asn Glu His Ile Thr Asn Val Asn Val Glu Ser Asn Phe

20 25

30

Ile Thr Gly Lys Gly Ile Leu Ala Ile Met Arg Ala Leu Gln His Asn

35 40

45

Thr Val Leu Thr Glu Leu Arg Phe His Asn Gln Arg His Ile Met Gly

50 55

60

Ser Gln Val Glu Met Glu Ile Val Lys Leu Leu Lys Glu Asn Thr Thr

65 70 75

80

Leu Leu Arg Leu Gly Tyr His Phe Lys Leu Pro Gly

85 90

B1  
Conclude